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EXAMINER

WANG, JIN CHENG

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/631,413

Applicant(s)

BERTHAUD, CHRISTOPHE

Examiner

Jin-Cheng Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed on 04/02/2004 has been entered. Claims 1, 7 and 13 have been amended.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-5 and 8-9, 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teres et al U.S. Patent No. 6,184,871 (hereinafter Teres) in view of Olsen et al. U.S. Patent No. 6,137,479 (hereinafter Olsen).

3. Claim 1:

(1) Teres teaches a watch including display means for at least one item of time related data and having an at least partially transparent outer element covering said display means or forming an outer portion of the display means, said watch

including first control means being formed of a plurality of touch sensitive sensors with each touch sensitive sensor having a touch sensitive pad being at least partially transparent and the touch sensitive pads are supported at least partially by said outer element wherein the touch

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sensitive sensors are of the capacitive type and sensitive pads are formed by electrodes deposited underneath the outer element (See Teres figures 1-5; column 2-5).

(2) Teres is silent to *the movement of cursor on a computer screen*.

(3) The Olsen reference has taught *a mouse watch 54* including display means for at least one item of time related data and having an at least partially transparent outer element covering the display means (figures 4-7, column 5, lines 65-67, column 6, lines 1-67, and column 7, lines 1-25). Olsen further teaches a mouse watch including control means for controlling the movement of cursor on a computer screen and touch sensitive sensors are built into the mouse watch to provide the computer mouse functions, i.e., the mouse watch can be used to detect the cursor movement on the display screen 26 (see for example, column 5, lines 42-67, and column 6, lines 1-67, column 7, lines 1-25).

(4) It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the interface feature of Olsen into Teres's watch device *for the control of a cursor on a display screen* in accordance to the fingertip's movement because Teres suggests providing a watch device formed by a matrix of photoelectrical sensors arranged on the bottom surface of the glass for identifying a manual action by a finger on the surface of the watch device to create a variation of an electrical quantity (e.g., Teres the Abstract) and data output ports such as the write recognition device (Teres figure 4 and column 4) for collecting the output signal as a result of finger motion on the watch device of Teres and Olsen teaches data ports (Olsen figure 1) for collecting the output signal from the microprocessor as a result of finger motion on the watch device of Olsen. Olsen further discloses a computer interface so that the output signal of Teres can be carried over to the computer for the control of a cursor in a

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display device. *Therefore, Teres's watch device may have incorporated the computer interface 38 of Olsen (Olsen figure 1 and Teres figure 4) to control a cursor of the display screen.*

(5) One having the ordinary skill in the art would have been motivated to do this to control a cursor by a manual action on a surface formed by a finger.

Claim 2:

Claim 2 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of "a watch crystal." The Teres/Olsen reference has taught an outer element such as the cover for the watch (see Teres figures 1-5; column 1-5; Olsen figures 4-7, column 6, lines 35-67 and column 7, lines 1-25). Furthermore, any conventional watch would require a cover to protect it from scratches, and the cover could be made from various materials including crystal as an outer element taught by Olsen in figures 4-5.

Claim 3:

Claim 3 recites all the limitations of claim 1 or 2 and adds the limitation of "first means is supported by the outer element." The Teres/Olsen reference has taught that the first means is supported by the outer element, i.e., the cover or surface for the watch as shown in figures 4-7 (Teres figures 1-5; column 1-5; Olsen column 6, lines 1-67 and column 7, lines 1-25).

Claim 4:

Claim 4 recites all the limitations of claim 1 or 2 and adds the limitation of "a part of sensitive pads is arranged in the top portion of the case." The Teres/Olsen reference has taught a cover of watch that protects sensors from scratches (Teres figures 1-5; column 1-5; Olsen column 6, lines 1-67 and column 7, lines 1-25).

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Claim 5:

Claim 5 recites all the limitations of claim 1 and adds the limitation of “sensitive pads arranged in the shape of a matrix.” The Teres and Olsen references have taught a watch with multiple sensors arranged to generate signals to control the position of the cursor on the display screen (Teres figures 1-5; column 1-5; Olsen column 6, lines 1-67 and column 7, lines 1-25). The Examiner interprets that an array of multiple sensors can be arranged in the shape of matrix.

Claim 8:

Claim 8 recites all the limitations of claim 5 and adds the limitation of “the movement of cursor corresponds to the path taken by the user’s finger.” Olsen in figures 4-7 further discloses the surface area of the watch to generate signals to control the position of the cursor on the display screen (Olsen column 6, lines 1-13). Since the user’s finger can move upon the watch’s surface area, the path taken by the user’s finger corresponds to the cursor’s movement across a display screen.

Claim 9 recites all the limitations of claim 1 and adds the limitation of “concentric zones.” Olsen discloses a mouse watch with cursor movements as claimed. See figures 4-5 and respective portions of the specification. Teres et al. teaches a wristwatch device having concentric zones as shown in figure 3.

Claim 11 recites all the limitations of claim 1 and adds the limitation of “second control means.” The Teres/Olsen reference has taught a second control means such as a trackball being

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incorporated into the mouse watch device (Teres figures 1-5; column 1-5; Olsen column 8, lines 58-59).

Claim 12 recites all the limitations of claim 11 and adds the limitation of “the second control means arranged in the top portion of case.” The Teres/Olsen discloses the second control means are arranged in the top portion of the watch (Teres figures 1-5; column 1-5; Olsen figures 4-7, column 8, lines 58-59).

Claim 13 recites all the limitations of claim 11 and adds the limitation of “the second control means formed by touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof.” The Teres reference further discloses the claim limitation of the second control means formed by touch sensitive sensor performed by means of a capacitive sensor supported by the outer element and located in the central region thereof (Teres figures 1-5; column 1-5 because Teres’s watch device also has the control means formed by touch sensitive sensor performed by means of a capacitive sensor supported by the outer element such as the glass of the watch and located in the central region thereof).

Claim 14 recites all the limitations of claim 11 and adds the limitation of “second control means arranged in a link of the wristband of the watch.” The Teres/Olsen reference clearly teaches a second control means arranged in a link of the wristband of the watch (Teres figures 1-5; column 1-5; Olsen column 6, lines 1-67, column 7, lines 1-25, column 8, lines 58-59).

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Claim 15 recites all the limitations of claim 11 and adds the limitation of “second control means formed by a push-button.” The Teres/Olsen reference has taught a second control means such as keys 64 that are formed by a push-button (Teres figures 1-5; column 1-5; Olsen column 6, lines 1-67, column 7, lines 1-25, and column 8, lines 58-59).

Claim 16 recites all the limitations of claim 11 and adds the limitation of “second control means formed by a pressure sensor.” The Teres/Olsen reference has taught a second control means such as a trackball formed by a pressure sensor (Teres figures 1-5; column 1-5; Olsen column 6, lines 1-67, column 7, lines 1-25, and column 8, lines 58-59).

Claim 17 recites all the limitations of claim 16 and adds the limitation of “pressure sensor formed by a piezoelectric crystal.” However, Teres/Olsen further discloses the claim limitation of pressure sensor formed by a piezoelectric crystal (Teres column 5).

Claim 18 recites all the limitations of claim 11 and adds the limitation of “second control means formed by micro-contactor or small travel contactor.” However, the Teres reference teaches a second control means such as push buttons or any other new control devices that may be replaced by other sensors (Teres column 5, lines 4-16).

4. Claim 6, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teres et al U.S. Patent No. 6,184,871 in view of Olsen et al. U.S. Patent No. 6,137,479, and further in view of Ferrari et al U.S. Patent No. 6,392,636.

Claim 6

Claim 6 recites all the limitations of claim 5 and adds the limitation of “means for detecting the actuation frequency of successive sensors.” The Olsen reference teaches in figures 4-5 a watch 54 as a pointing device having a display and controls like a conventional watch and a person wears it like a conventional watch. Sensors are built into the watch to provide the computer mouse functions. The Teres reference teaches a watch with means for detecting the activated sensor representing the greatest variation of electrical quantity comprising conversion means of the total capacity of the set of the fixed capacitor and the parasite capacitor of each capacitive sensor A to S into an output signal having a frequency proportional to this total capacity (column 3, lines 24-37).

Although, Teres and Olsen is silent to detecting the speed of a user's finger over the outer element, Ferrari teaches a portable device having a display screen by providing an electrical output signal for selectively controlling movement of a cursor across the display screen. Ferrari further teaches capacitive sensing cells arranged in a row/column array top to produce output signals for control of cursor movement in both a row direction and an orthogonal column direction. Ferrari also teaches the horizontal and vertical direction such as the two X and Y array outputs being proportional to the zero and first moment of the 2-D pattern (column 11, lines 32-41 of the Ferrari reference). Therefore, Ferrari has taught that ratio between the movement of cursor and the path taken by a user's finger across an outer element is less at low speed or actuation frequency than at relatively high speed or actuation frequency.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the additional means of cursor movement of Ferrari in the watch device of Teres and Olsen to control a cursor on a display screen in accordance to the fingertip's movement speed. One having the ordinary skill in the art would have been motivated to do this to provide a more sensitive or high precision control to the cursor movement across a display screen.

Claim 7:

Claim 7 recites all the limitations of claim 6 and adds the limitation of "the ratio between the movement of cursor and the path." Teres/Olsen teaches all the limitations of claim 6.

However, the references are silent on the additional limitation as recited in claim 7.

Ferrari teaches a portable device having a display screen by providing an electrical output signal for selectively controlling movement of a cursor across the display screen. Ferrari further teaches capacitive sensing cells arranged in a row/column array top to produce output signals for control of cursor movement in both a row direction and an orthogonal column direction. Ferrari also teaches the horizontal and vertical direction such as the two X and Y array outputs being proportional to the zero and first moment of the 2-D pattern (column 11, lines 32-41 of the Ferrari reference). Therefore, Ferrari has taught that ratio between the movement of cursor and the path taken by a user's finger across an outer element is less at low speed or actuation frequency than at relatively high speed or actuation frequency.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the additional means of cursor movement of Ferrari in

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the watch device of Teres/Olsen to control a cursor on a display screen in accordance to the fingertip's movement speed. One having the ordinary skill in the art would have been motivated to do this to provide a more sensitive or high precision control to the cursor movement across a display screen.

Claim 10:

Claim 10 recites all the limitations of claim 9 and adds the limitation of "speed of movement of said cursor." Olsen discloses a mouse watch with cursor movements as claimed. See figures 4-5 and respective portions of the specification. Teres et al. teaches a wristwatch device having concentric zones as shown in figure 3.

However, the references are silent to the speed of movement of said cursor.

Ferrari teaches a portable device having a display screen by providing an electrical output signal for selectively controlling movement of a cursor across the display screen. Ferrari further teaches capacitive sensing cells arranged in a row/column array top to produce output signals for control of cursor movement in both a row direction and an orthogonal column direction. Ferrari also teaches the horizontal and vertical direction such as the two X and Y array outputs being proportional to the zero and first moment of the 2-D pattern (column 11, lines 32-41 of the Ferrari reference). Therefore, Ferrari has taught that ratio between the movement of cursor and the path taken by a user's finger across an outer element is less at low speed or actuation frequency than at relatively high speed or actuation frequency.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated the additional means of cursor movement of Ferrari in the watch device of Teres/Olsen to control a cursor on a display screen in accordance to the

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fingertip's movement speed. One having the ordinary skill in the art would have been motivated to do this to provide a more sensitive or high precision control to the cursor movement across a display screen.

Remarks

5. Applicant's arguments, filed 04/2/2004, paper number 15, have been fully considered but they are not deemed to be persuasive.

6. In Remarks, Applicant argues in essence with respect to the amended Claim 1 and similar claims that:

“Moreover, there is no suggestion in Teres to associate the movement of the finger on the surface, i.e., the glass of the watch, with control means for controlling the movement of a cursor on a computer screen.”

This is not found persuasive because Teres teaches in column 2, lines 49-67 and column 4 to associate the movement of the finger on the surface of the glass of the watch and the capacitive sensors detect the position of the finger and generate an output signal for the identification device or the writing recognition device in response to the user's touch on the surface of the glass (See Figure 1). Teres also teaches the control means for controlling the input signals to the identification device or the writing recognition device. Although Teres is silent to whether the output signal so generated is used for controlling the movement of the cursor on a computer screen, Olsen teaches a mouse watch including control means for controlling the movement of cursor on a computer screen and touch sensitive sensors are built into the mouse watch to provide the computer mouse functions, i.e., the mouse watch can be used to detect the

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cursor movement on the display screen 26 (see for example, column 5, lines 42-67, and column 6, lines 1-67, column 7, lines 1-25).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have combined the control means of Olsen with Teres's control means in Teres's watch device for the control of a cursor on a display screen in accordance to the fingertip's movement because Teres suggests providing a watch device formed by a matrix of photoelectrical sensors arranged on the bottom surface of the glass for identifying a manual action by a finger on the surface of the watch device to create a variation of an electrical quantity (e.g., Teres the Abstract) and data output ports such as the write recognition device (Teres figure 4 and column 4) for collecting the output signal as a result of finger motion on the watch device of Teres and Olsen teaches data ports (Olsen figure 1) for collecting the output signal from the microprocessor as a result of finger motion on the watch device of Olsen. Olsen further discloses a computer interface so that the output signal of Teres can be carried over to the computer for the control of a cursor in a display device. Therefore, Teres's watch device may have incorporated the computer interface 38 of Olsen (Olsen figure 1 and Teres figure 4) to control a cursor of the display screen.

Therefore, Teres and Olsen fulfill the amended Claim 1 as currently drafted.

7. In Remarks, Applicant argues in essence with respect to the amended Claim 1 and similar claims that:

"In order to distinguish more clearly claim 1 from the third alternative solution, claim 1 has been currently amended defining more precisely the first control means which are

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now limited to touch sensitive sensors of the capacitive type and sensitive pads formed by electrodes deposited underneath the outer element. This is not the case in the pressure sensor disclosed in Olsen.”

This is not found persuasive because Teres teaches in column 2-5 the first control means formed by the touch sensitive sensors of the capacitive type and sensitive pads formed by electrodes deposited underneath the outer element. In the rejection of the claim 1 set forth in above, the Examiner has not relied on Olsen to teach the claim limitation of touch sensitive sensors of the capacitive type and sensitive pads formed by electrodes deposited underneath the outer element. The Examiner only rely on the Olsen’s computer interface to be combined with Teres’s watch device for providing signals for controlling the mouse’s movement on a display screen. Olsen’s computer interface is combined with the Teres’s watch device so that the output signal of Teres can be carried over to the computer for the control of a cursor in a display device. *Therefore, Teres’s watch device may have incorporated the computer interface 38 of Olsen (Olsen figure 1 and Teres figure 4) to control a cursor of the display screen.*

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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